Sweat Bands

If sweat bands are necessary, they must not interfere with the effectiveness of the helmet headband system. Some sweatband devices are made to fit on the headband. For electrical work, metal components must not be used to attach sweat bands to helmets.

Winter Liners

There are many varieties of winter liners. One type fits over the hard hat assembly. It is flame retardant and elasticized to give the user a snug, warm fit. Other styles fit under the helmet. If the liner is to be used with a Class E helmet, it must have a dielectric rating. Regardless of the warmth characteristics, the liner and helmet combination should be compatible. The liner and helmet must fit properly to give the employee proper impact and penetration protection.

Chin Straps

When wind or other conditions present the possibility of the hard hat being accidentally removed from the head, chin straps can be used. If chin straps are used, they should be the type that fastens to the shell of the hard hat. If the chin straps fasten to the headband and suspension system, the shell may blow off and strike another employee.

Foot and Leg Protection

Employees who face possible foot or leg injuries from falling or rolling objects or from crushing or penetrating materials must wear protective footwear. Also, employees whose work involves exposure to hot substances or corrosive or poisonous materials must have protective gear to cover exposed body parts, including legs and feet. If an employee's feet may be exposed to electrical hazards, nonconductive footwear must be worn. On the other hand, workplace exposure to static electricity may necessitate the use of conductive footwear.

Examples of situations in which an employee may be required to wear foot and/or leg protection include:

- When heavy objects such as barrels or tools might roll onto or fall on the employee's feet.
- Working with sharp objects such as nails or spikes that could pierce the soles or uppers of ordinary shoes.
- Exposure to molten metal that might splash on feet or legs.
- Working on or around hot, wet or slippery surfaces.
- Working when electrical hazards are present.

Safety footwear must comply with any of the following consensus standards for the general and maritime industries: ASTM F-2412-2005 and ASTM F-2413-2005 or the ANSI minimum compression and impact performance standards in ANSI Z41-1999 or ANSI Z41-1991, or provide equivalent protection. Safety toe footwear for employees in the construction industry must meet the requirements and specifications in American National Standard for Men's Safety-Toe Footwear, Z41.1-1967.*

Foot and leg protection choices include the following:

- **Leggings** protect the lower legs and feet from heat hazards such as molten metal or welding sparks. Safety snaps allow leggings to be removed quickly.
- **Metatarsal guards** protect the instep area from impact and compression. Made of aluminum, steel, fiber or plastic, these guards may be strapped to the outside of shoes. Footwear designed to newer versions of ANSI Z41 and the ASTM standards require metatarsal protection to be built into the footwear.
- **Toe guards** fit over the toes of regular shoes to protect the toes from impact and compression hazards. They may be made of steel, aluminum or plastic.
  Note: ANSI Z41-1991 requires the toe box be incorporated into the footwear during construction and shall be an integral part of the footwear. An employer who chooses to provide employees with toe guards must demonstrate that they are as equally protective as the ANSI Z41-1991 standard.
- **Combination foot and shin guards** protect the lower legs and feet, and may be used in combination with toe guards when greater protection is needed.

*Note: ANSI Z41-1991 replaced ANSI Z41.1-1967. ANSI Z41-1991 was then superseded by ASTM F2412-05, Standard Test Methods for Foot Protection, and F2413-05, Standard Specification for Performance Requirements for Foot Protection. For the construction industry, NCDOL will accept foot protection designed in accordance with the ASTM standards, current ANSI standards (Z41 1999 or 1991) as well as existing foot protection designed in accordance with ANSI Z41.1 as stated above.